Reading Assignment # 16

Math 9 - Prof. Orellana

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Read Sections 14.1 and 14.2 and then answer the following questions.

1. How would you summarize goals of Section 14.1?
2. What is a function? What is the definition of a vector-valued function in your book. Give an example.
3. How do we take limits of a vector valued function?
4. What does it mean for a vector valued function to be continuous at a?
5. Summarize the paragraph before Example 3.
6. What is the difference between example 3 and example 4 and examples 5 and 6?
7. What do we mean by a parametrization of a curve?
8. What is the objective of Section 14.2?
9. Give the definition of the derivative of a vector-valued function. Is there a geometric significance to this derivative? Explain your answer in detail.
10. State Theorem 2 and tell me in your own words what it says.
11. Read the proof of Theorem 2, close the book and write the proof as you understand it.
12. What are the rules of differentiation for vector-valued functions?
13. Is there a meaning in physics for the derivative and second derivative of vector-valued functions?
14. How is the definite integral defined for vector-valued functions? How do we compute them?